

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants: Michael Anthony Pugel; Douglas Edward Lankford;  
John Joseph Curtis III; Keith Reynolds Wehmeyer;  
Mike Arthur Derrenberger; Terry Wayne Lockridge;  
Andrew Eric Bowyer

Filed : 27 July 2006

For : APPARATUS AND METHOD FOR DISTRIBUTING  
SIGNALS BY DOWN-CONVERTING TO VACANT  
CHANNELS

Examiner: Dominic E. Rego

Art Unit : 2618

APPEAL BRIEF

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

This is an Appeal Brief responsive to the final rejection dated  
17 March 2009, rejecting Claims 1-20, all of the pending claims. Please  
charge the fee for this Brief to Deposit Account No. 07-0832.

Table of Contents

<u>Appeal Brief Section</u>	<u>Page Number</u>
Real Party in Interest	3
Related Appeals and Interferences	4
Status of Claims	5
Status of Amendments	6
Summary of Claimed Subject Matter	7
Grounds of Rejection to be Reviewed on Appeal	8
Argument	9
Conclusion	15
Claims Appendix	16
Evidence Appendix	20
Related Proceedings Appendix	26

**Real Party in Interest**

The real party in interest is the assignee of record:

Thomson Licensing S.A.  
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France

**Related Appeals and Interferences**

The Appellants assert that no other appeals or interferences are known to the Appellants, their legal representatives, or assignee, which will directly affect or be directly affected by, or have a bearing on, the decision of the Board in the pending appeal.

**Status of Claims**

The finally rejected Claims 1-20 are set forth in the Claims Appendix. All amendments to the Claims have been entered. No Claim has been allowed.

Customer No. 24498  
Ser. No. 10/549,258

PU040067

**Status of Amendments**

All amendments have been entered.

**Summary of Claimed Subject Matter**

The following is a recitation of independent Claims 1 and 11, with reference to the instant specification and drawing:

1. An apparatus (20), comprising:  
processing means (21-32) for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals (page 4, lines 20-21);  
control means (34) for enabling generation of said analog signals responsive to a request signal (page 7, lines 14-19); and  
wherein said analog signals are provided to a client device (40) via a transmission medium connecting said apparatus (20) and said client device (page 7, lines 23-27).
11. A method (500) for distributing signals from a gateway apparatus to a device, comprising steps of:  
receiving satellite signals (510) (page 11, lines 27-28);  
receiving (520) a request signal from said device indicating a channel (page 12, lines 1-5);  
processing (540) said received signals to generate analog signals corresponding to said channel responsive to said request signal (page 12, lines 15-17), without demodulating said received signals (page 4, lines 20-21); and  
providing (550) said analog signals to said device via a transmission medium connecting said gateway apparatus and said device (page 12, lines 27-29).

**Grounds of Rejection to be Reviewed on Appeal**

1. Whether Claims 1-20 are properly provisionally rejected on the ground of non-statutory obviousness-type double patenting over Claims 1-30 of US Application 10/549,259.
2. Whether Claims 1, 10, 11 and 20 are patentable under 35 USC 103(a) over US 2004/0017671 to Rajendran et al in view of US 2006/0117340 to Pavlovskaja et al.
3. Whether Claims 2 and 12 are patentable under 35 USC 103(a) over Rajendran et al in view of Pavlovskaja et al and WO 02/25847 to Zydonik.
4. Whether Claims 5, 6, 15 and 16 are patentable under 35 USC 103(a) over Rajendran et al in view of Pavlovskaja et al and US 2002/0062481 to Slaney et al.
5. Whether Claims 7 and 17 are patentable under 35 USC 103(a) over Rajendran et al in view of Pavlovskaja et al, Slaney et al and US 2001/0044835 to Schober et al.
6. Whether Claims 3, 8, 9, 13, 18 and 19 are patentable under 35 USC 103(a) over Rajendran et al in view of Pavlovskaja et al and US 2004/0085143 to Stoddard et al.
7. Whether Claims 4 and 14 are patentable under 35 USC 103(a) over Rajendran et al in view of Pavlovskaja et al, Stoddard et al and US 2004/0163124 to Basawapatna et al



### Argument

Claims 1-20 have been provisionally rejected as non-statutory double patenting with copending US Application 10/549,259. The Appellants submit that the Examiner has misinterpreted the Claims of copending US Application 10/549,259. Nowhere does Claim 1 of copending US Application 10/549,259 recite generating analog signals without demodulating received signals. Rather, Claim 1 of copending US Application 10/549,259 merely recites generation of processed analog signals. The same is true of Claim 10 of copending US Application 10/549,259. In fact, NONE of the claims of copending US Application 10/549,259 recite this feature, and ALL of the claims of the instant application recite this feature.

Nowhere is this feature shown or suggested by any of the art cited by the Examiner, as explained below. It is therefore clear that the Claims of the instant application are patentably distinct from the Claims of copending US Application 10/549,259, and that the provisional non-statutory double patenting rejection applied by the Examiner is improper and should be reversed.

Claims 1 and 11 have been rejected as unpatentable over US 2004/0017671 to Rajendran et al in view of US 2006/0117340 to Pavlovskaja et al.

The Appellants submit that the Examiner has misinterpreted US 2004/0017671 to Rajendran et al. In ¶0035 of Rajendran et al, analog signals are generated. However, nowhere does Rajendran et al show or suggest that such signals are generated without demodulating received signals. Nowhere does Rajendran et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in Claim 1 of the instant application. Furthermore, nowhere does Rajendran et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in Claim 11. It is therefore clear that Rajendran et al does not affect the patentability of either of Claims 1 and 11.

Pavlovskaja et al relates to a video distribution system in which a user may select a program from a web content server. Nowhere does Pavlovskaja et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in Claim 1 of the instant application. Furthermore, nowhere does Pavlovskaja et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in Claim 11. It is therefore clear that even if the disclosures of Rajendran et al and Pavlovskaja et al were to be combined, the patentability of Claims 1 and 11 would not be affected. The Examiner's rejection of Claims 1 and 11 should therefore be reversed.

Claims 2 and 12 are dependent, respectively, from Claims 1 and 11. The Examiner has rejected these claims as unpatentable over Rajendran et al, Pavlovskaja et al and WO 02/25847 to Zydonik. Rajendran et al and Pavlovskaja et al are discussed above. The Examiner has cited Zydonik to

show the use of RG-59 cable. However nowhere does Zydonik show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in parent Claim 1 of the instant application.  
Furthermore, nowhere does Zydonik show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in parent Claim 11. It is therefore clear that Zydonik does not affect the patentability of independent Claims 1 and 11, and that therefore Zydonik does not affect the patentability of dependent Claims 2 and 12. The Appellants submit that the Examiner’s rejection of Claims 2 and 12 should be reversed, as their parent Claims 1 and 11.

The Examiner has rejected dependent Claims 5, 6, 15 and 16 as unpatentable over Rajendran et al, Pavlovskaja et al, and US 2002/0062481 to Slaney et al. Rajendran et al and Pavlovskaja et al have been discussed above. Slaney et al has been cited to show selection of a frequency band. However, nowhere does Slaney et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in parent Claim 1 of the instant application.  
Furthermore, nowhere does Slaney et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in parent Claim 11. It is therefore clear that Slaney et al does not affect the patentability of independent Claims 1 and 11, and that therefore Slaney et al does not affect the patentability of dependent Claims 5, 6, 15, and 16. The Appellants submit that the Examiner’s rejection of Claims 5, 6, 15 and 16 should be reversed, as their parent Claims 1 and 11.

The Examiner has rejected dependent Claims 7 and 17 as unpatentable over Rajendran et al, Pavlovskaja et al, Slaney et al and US 2001/0044835 to Schober et al. Rajendran et al, Pavlovskaja et al and Slaney et al have been discussed above. Schober et al has been cited to show detection of an available frequency band based on a user input. The Appellants submit that the Examiner has misinterpreted this reference. Schober et al relates to selection of content based on an available bandwidth. Nowhere does Schober et al detect an available frequency band. Nevertheless, nowhere does Schober et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in parent Claim 1 of the instant application. Furthermore, nowhere does Schober et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in parent Claim 11. It is therefore clear that Schober et al does not affect the patentability of independent Claims 1 and 11, and that therefore Schober et al does not affect the patentability of dependent Claims 7 and 17. The Appellants submit that the Examiner's rejection of Claims 7 and 17 should be reversed, as their parent Claims 1 and 11.

The Examiner has rejected subclaims 3, 8, 9, 13, 18 and 19 as unpatentable over Rajendran et al, Pavlovskaja et al, and US 2004/0085143 to Stoddard et al. Rajendran et al, and Pavlovskaja et al have been discussed above. Stoddard et al relates to a precision noise generator, in which the output of digital to analog converter 14 is filtered to generate a filtered analog signal. Nowhere does Stoddard et al generate frequency converted signals. Rather, Stoddard et al performs a digital to analog conversion. Nevertheless, nowhere does Stoddard et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in parent Claim 1 of the instant application. Furthermore, nowhere does Stoddard et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in parent Claim 11. It is therefore clear that Stoddard et al does not affect the patentability of independent Claims 1 and 11, and that therefore Stoddard et al does not affect the patentability of dependent Claims 3, 8, 9, 13, 18, and 19. The Appellants submit that

the Examiner's rejection of Claims 3, 8, 9, 13, 18, and 19 should be reversed, as their parent Claims 1 and 11.

The Examiner has rejected dependent Claims 4 and 14 as unpatentable over Rajendran et al, Pavlovskaja et al, Stoddard et al and US 2004/0163124 to Basawapatna et al. Rajendran et al, Pavlovskaja et al, and Stoddard et al have been discussed above. The Examiner has cited Basawapatna et al to show conversion of signals in a band above 1 GHz to a band below 1GHz. Such conversion is accomplished by a two-stage conversion: an LNB converts 4 GHz signals to L-band, and an IRD converts L-band signals to base band signals. However, even if the disclosures of Rajendran et al, Pavlovskaja et al, Stoddard et al and Basawapatna et al were to be combined, the invention defined by Claims 4 and 14 would not be obtained. Nowhere does Basawapatna et al show or suggest:

“processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals”,

as specifically recited in parent Claim 1 of the instant application. Furthermore, nowhere does Basawapatna et al show or suggest:

“processing said received signals to generate analog signals corresponding to said channel responsive to said request signal, without demodulating said received signals”,

as specifically recited in parent Claim 11. It is therefore clear that Basawapatna et al does not affect the patentability of independent Claims 1 and 11, and that therefore Basawapatna et al does not affect the patentability of dependent Claims 4 and 14. The Appellants submit that the Examiner's rejection of Claims 4 and 14 should be reversed, as their parent Claims 1 and 11.

Conclusion

The Appellants therefore submit that the rejection of Claims 1-20 should be reversed. A notice to that effect is respectfully solicited.

Respectfully submitted,

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**CLAIMS APPENDIX**

1. An apparatus comprising:  
processing means for receiving satellite signals and processing said received signals to generate analog signals without demodulating the received signals;

control means for enabling generation of said analog signals responsive to a request signal; and

wherein said analog signals are provided to a client device via a transmission medium connecting said apparatus and said client device.

2. The apparatus of claim 1, wherein said transmission medium includes RG-59 cable.

3. The apparatus of claim 1, wherein said processing means includes:

frequency converting means for converting said received signals from a first frequency band to a second frequency band to generate frequency converted signals; and

filtering means for filtering said frequency converted signals to generate said analog signals.

4. The apparatus of claim 3, wherein:  
said first frequency band is greater than 1 GHz; and  
said second frequency band is less than 1 GHz.

5. The apparatus of claim 1, wherein:  
said control means detects an available frequency band on said transmission medium; and  
said available frequency band is used to provide said analog signals to said client device.



6. The apparatus of claim 5, wherein said control means scans a plurality of frequency bands on said transmission medium to detect said available frequency band.

7. The apparatus of claim 5, wherein said control means detects said available frequency band based on a user input which selects said available frequency band.

8. The apparatus of claim 5, wherein said processing means comprises:

frequency converting means for converting said received signals from a first frequency band to the available frequency band to generate frequency converted signals; and

filtering means for filtering said frequency converted signals to generate said analog signals.

9. The apparatus of claim 8, wherein said frequency converting means comprises a signal mixer.

10. The apparatus of claim 1, wherein said request signal is provided to said apparatus via said transmission medium.

11. A method for distributing signals from a gateway apparatus to a device, comprising steps of:

receiving satellite signals;

receiving a request signal from said device indicating a channel;

processing said received signals to generate analog signals corresponding to said channel responsive to said request signal without demodulating said received signals; and

providing said analog signals to said device via a transmission medium connecting said gateway apparatus and said device.

12. The method of claim 11, wherein said transmission medium includes RG-59 cable.

13. The method of claim 11, wherein said processing step includes:

converting said received signals from a first frequency band to a second frequency band to generate frequency converted signals; and  
filtering said frequency converted signals to generate said analog signals.

14. The method of claim 13, wherein:  
said first frequency band is greater than 1 GHz; and  
said second frequency band is less than 1 GHz.

15. The method of claim 11, further comprising a step of:  
detecting an available frequency band on said transmission medium; and

wherein said available frequency band is used to provide said analog signals to said device.

16. The method of claim 15, wherein said detecting step includes scanning a plurality of frequency bands on said transmission medium to identify said available frequency band.

17. The method of claim 15, wherein said detecting step is performed based on a user input which selects said available frequency band.

18. The method of claim 15, wherein said processing step comprises the steps of:

converting said received signals from a first frequency band to the available frequency band to generate frequency converted signals; and  
filtering said frequency converted signals to generate said analog signals.

19. The method of claim 18, wherein said converting step comprises the step of mixing said received signals in the first frequency band with a generated frequency signal.

20. The method of claim 11, wherein said request signal is provided to said gateway apparatus via said transmission medium.

**Evidence Appendix**

For the convenience of the Board, the Appellants set forth the Claims of copending Application 10/549,259:

1. An apparatus comprising:  
processing means for receiving broadcast signals and processing said received signals to generate processed analog signals;  
receiving means for receiving a request signal from a device via a transmission medium connecting said apparatus and said device, wherein said processed analog signals are provided to said device via said transmission medium responsive to said request signal, further wherein said request signal specifies a desired processed analog signal by identifying a program; and  
control means for detecting an available frequency band on said transmission medium, wherein said available frequency band is used to provide said processed analog signals to said device, thereby causing said transmission medium to be shared between said processed analog signals and cable broadcast signals distributed over said transmission medium.
2. The apparatus of claim 1, wherein said transmission medium includes RG-59 cable.
3. The apparatus of claim 1, wherein said broadcast signals are transmitted from a satellite source.
4. The apparatus of claim 1, wherein said broadcast signals are transmitted from a digital terrestrial source.
5. The apparatus of claim 1, wherein said control means scans a plurality of frequency bands on said transmission medium to detect said available frequency band.

6. The apparatus of claim 1, wherein said control means detects said available frequency band based on a user input which selects said available frequency band.

7. The apparatus of claim 1, wherein said processing means comprises front-end processing means for extracting a desired digital transport stream from said received signals responsive to said request signal.

8. The apparatus of claim 8, wherein said processing means further comprises:

encoding means for encoding said desired digital transport stream with error correction data to generate encoded digital signals;

digital-to-analog converting means for converting said encoded digital signals to analog baseband signals; and

modulating means for modulating said analog baseband signals to generate said processed analog signals.

9. The apparatus of claim 1, wherein said receiving means comprises demodulating means for demodulating said request signal.

10. A method for distributing signals from a gateway apparatus to a client device, comprising steps of:

receiving broadcast signals from a broadcast source;

receiving a request signal from said client device via a transmission medium connecting said gateway apparatus and said client device, said request signal indicative of a desired digital transport stream;

processing said received signals to generate processed analog signals;

detecting an available frequency band on said transmission medium, wherein said available frequency band is used to provide said processed analog signals to said client device; and

providing said processed analog signals to said client device via said transmission medium responsive to said request signal thereby causing said transmission medium to be shared between said processed analog signals and cable broadcast signals distributed over said transmission medium, wherein said request signal specifies a desired processed analog signal by identifying a program.

11. The method of claim 10, wherein said transmission medium includes RG-59 cable.

12. The method of claim 10, wherein said broadcast signals are transmitted from a satellite source.

13. The method of claim 10, wherein said broadcast signals are transmitted from a digital terrestrial source.

14. The method of claim 10, wherein said detecting step includes scanning a plurality of frequency bands on said transmission medium to identify said available frequency band.

15. The method of claim 10, wherein said detecting step is performed based on a user input which selects said available frequency band.

16. The method of claim 10, further comprising steps of:  
extracting a desired digital transport stream from said received signals responsive to said request signal;

encoding said desired digital transport stream with error correction data to generate encoded digital signals;

converting said encoded digital signals to analog baseband signals;  
and

modulating said analog baseband signals to generate said processed  
analog signals.

17. A client device comprising:

a front-end processor operative to process analog signals provided  
from an apparatus via a transmission medium connecting said apparatus  
and said client device

a back channel processor operative to generate a request signal  
responsive to a user input, wherein said request signal is provided to said  
apparatus via said transmission medium and causes said apparatus to  
provide said processed analog signals to said client device, further  
wherein said request signal specifies a desired processed analog signal by  
identifying a program; and

control means for detecting an available frequency band on said  
transmission medium, wherein said available frequency band is used to  
provide said processed analog signals to said device, thereby causing said  
transmission medium to be shared between said processed analog signals  
and cable broadcast signals distributed over said transmission medium.

18. The client device of claim 17, wherein said transmission  
medium includes RG-59 cable.

19. The client device of claim 17, wherein:

said front-end processor processes said analog signals to generate a  
digital transport stream, and further comprising:

an A/V processor operative to process said digital transport stream  
to generate output signals.

20. The client device of claim 19, wherein said back channel processor scans a plurality of frequency bands on said transmission medium to detect said available frequency band.

21. The client device of claim 19, wherein said back channel processor detects said available frequency band based on a user input which selects said available frequency band.

22. A gateway apparatus, comprising:  
a front-end processor operative to receive signals from a broadcast source and process said received signals to extract a desired digital transport stream;  
an encoder operative to encode said desired digital transport stream with error correction data to generate encoded digital signals;  
a digital-to-analog converter operative to convert said encoded digital signals to analog baseband signals;  
a modulator operative to modulate said analog baseband signals to generate processed analog signals, wherein said processed analog signals are provided to a client device via a coaxial cable connecting said gateway apparatus and said client device, further wherein said client device requests a desired processed analog signal by identifying a program; and  
a controller operative to detect an available frequency band on said coaxial cable, wherein said available frequency band is used to provide said processed analog signals to said client device, thereby causing said coaxial cable to be shared between said processed analog signals and cable broadcast signals distributed over said coaxial cable.

23. The gateway apparatus of claim 22, wherein said coaxial cable includes RG-59 cable.

24. The gateway apparatus of claim 22, wherein said broadcast source includes a satellite source.



25. The gateway apparatus of claim 22, wherein said broadcast source includes a digital terrestrial source.

26. The gateway apparatus of claim 22, wherein said controller scans a plurality of frequency bands on said coaxial cable to detect said available frequency band.

27. The gateway apparatus of claim 22, wherein said controller detects said available frequency band based on a user input which selects said available frequency band.

28. The gateway apparatus of claim 22, wherein said front-end processor extracts said desired digital transport stream responsive to said request by said client device provided to said gateway apparatus via said coaxial cable.

29. The apparatus according to claim 1, wherein said apparatus is a gateway apparatus.

30. The apparatus according to claim 1, wherein said processing means further comprises:

first processing means for receiving broadcast signals and processing said received broadcast signals to extract a desired digital transport stream; and

second processing means for processing said desired digital transport stream to generate said processed analog signals.

**Related Proceedings Appendix**

The Appellants assert that there are no other proceedings related to this application.